

WRS
L7T Co.

Williamsburg Receiving and Storage
February 12, 2003 Secondary Containment Work Plan Supplement
DRAFT OUTLINE for Discussion Purposes
Meeting with MDEQ 10-13-03
Proposed Secondary Containment Structure

US EPA RECORDS CENTER REGION 5



527034

R 324.2002 Definitions; p to u.

Rule 2. As used in this part:

(d) "Secondary containment structure" means a unit, other than the primary container in which polluting material is packaged or held, that is **designed, constructed, and operated** so that the polluting material cannot escape from the unit through public sewers, drains, or otherwise directly or indirectly into any public sewer system or to the surface waters or groundwaters of this state.

R 324.2005 Secondary containment.

(2) Secondary containment structures for liquids shall comply with all of the following provisions:

(a) Be constructed of materials that are compatible with, and impervious to, or otherwise capable of containing, any spilled, leaked, or discharged polluting materials so that the materials can be recovered and so that polluting materials cannot escape directly or indirectly to any public sewer system or to the surface waters or groundwaters of this state.

(b) Provide a capacity that is not less than 10% of the total volume of the tanks or containers within the secondary containment structure or provide a capacity of 100% of the largest single tank or container within the secondary containment structure, whichever is larger.

(c) Allow surveillance of the tanks or containers, the timely detection of any leaks and recovery of any spillage, and the removal and proper disposal of any captured precipitation so that the minimum required capacity is maintained at all times. Captured precipitation may be removed by drainage through normally closed valves if all of the following conditions are met:

- (i) The drainage is conducted under the direct supervision of qualified facility personnel.
- (ii) The valves are secured closed at all times, except during precipitation removal.
- (iii) The drainage is performed in full compliance with all applicable local, state, and federal requirements.

PROPOSED DESIGN ATTRIBUTES

Meets 2005(2)(a.) for Compatibility (40 mil PVC Material)

Meets 2005(2)(b.) for Volume of containment- Double Liner System

Meets 2005(2)(c.) for Surveillance-

Conductivity-based leak detection (measured daily)

Liquid level visually monitored (daily)

Meets 2005(2)(c.) for Recovery of Spillage-

Pump-out primary and disassemble to inspect in event of conductivity anomaly

Meets 2005(2)(c.) for Precipitation Management-

Secondary liner not exposed to precipitation

Primary liner precipitation management in accordance with SOPs developed under PIPP.

SOP to comport with 2005(2)(c.)(i.) and (iii.)

PROPOSED CONSTRUCTION ATTRIBUTES

Construct in accordance with soil mechanical properties (slope stability)

Use of geotextile for added strength and maintenance of interstices

Construction widely used throughout industry

OPERATION ATTRIBUTES

Daily leak detection (conductance) measurements

Long-term statistical evaluation of data for liner degradation detection

Daily inventory/volume inspection

Resistivity of NaCl Solutions

Conversion approximated by: $R_2 = R_1 [(T_1 + 6.77)/(T_2 + 6.77)]^{\circ F}$ or $R_2 = R_1 [(T_1 + 21.5)/(T_2 + 21.5)]^{\circ C}$

